

## A New Species of *Isonychia* From China (Ephemeroptera: Oligoneuriidae)

SHE SHUSHENG and YOU DASHOU

Department of Biology, Nanjing Teachers University, 122 Ninghai Road,  
Nanjing, China

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*Abstract.*—A new species, *Isonychia hainanensis*, is described and illustrated from specimens collected in Hainan Island, Guangdong Province, China.

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Presently three species of *Isonychia* are known from China (Gui 1985). During studies of the mayflies of Hainan Island, a distinctive undescribed species was collected.

### *Isonychia hainanensis*, n. sp.

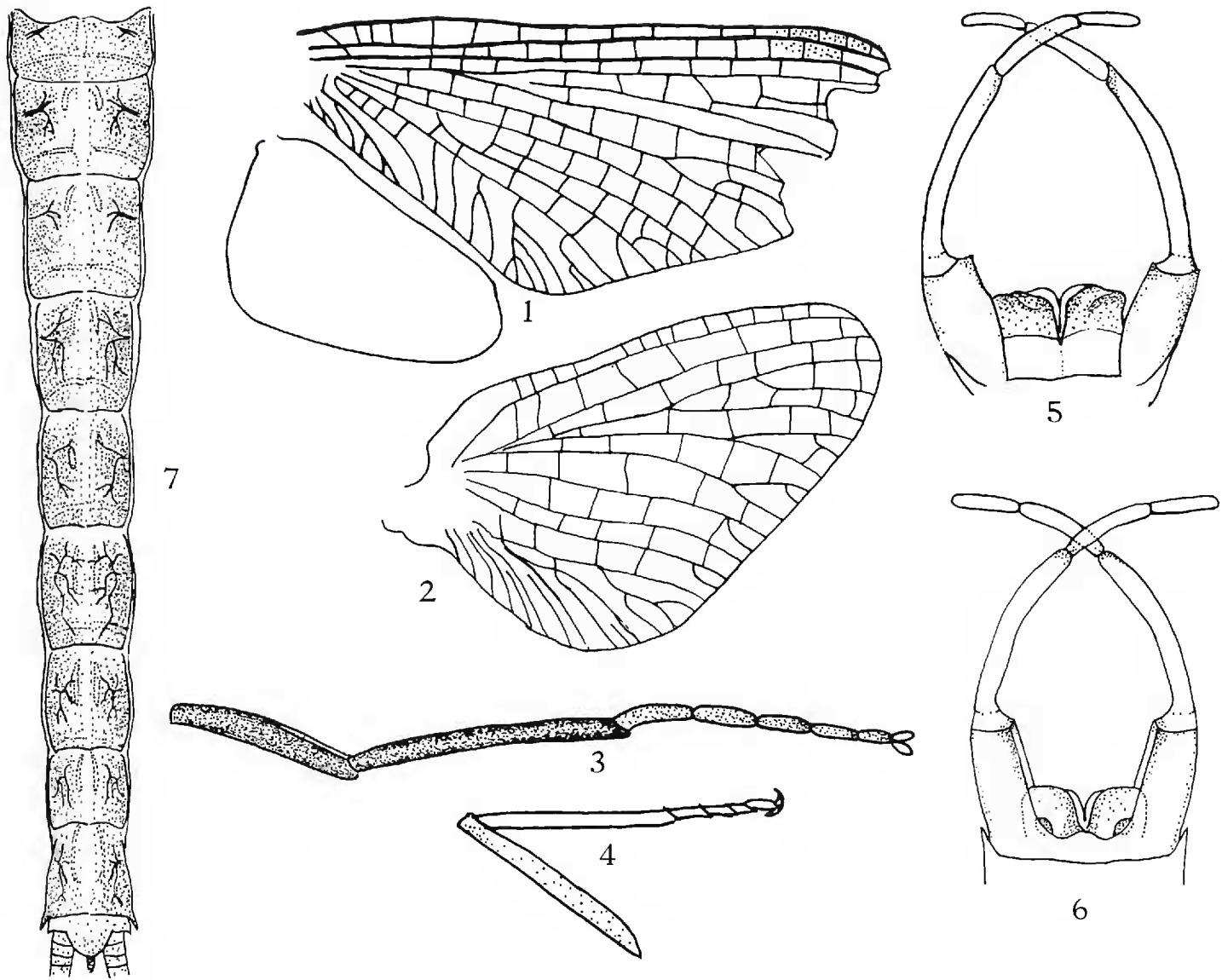
Figs. 1–11

Male Imago (in alcohol): Length of body 14 mm, forewing length 13 mm, hindwing length 5 mm. *Head*: Base of ocelli dark brown; scape and flagellum light brown. *Thorax*: Pronotum brown, bordered with white anteriorly and laterally; mesonotum and metanotum dark reddish-brown; thoracic pleura and coxae marked with contrasting areas of dark reddish-brown and white. Fore femora and tibia brown, tarsi light brown (Fig. 3). Femur of meso and meta-thoracic legs yellowish, tarsi paler (Fig. 4). Tarsal ratio: 0.8: 0.7: 0.6: 0.5: 0.4. Gill remnants present at bases of forecoxae. Forewings (Fig. 1) hyaline, veins light brown and stigmatic area dull white. MA forked beyond middle. CuA 3 branched and two unbranched veins to the margin. Vein MP of hind wing forked near margin, stem longer than fork (Fig. 2). *Abdomen*. Reddish-brown with white lateral margins. A pale middorsal stripe on terga 1–9 (Fig. 7); terga 2–9 with a pair of small submedian streaks, Pleural fold pale. Cerci reddish-brown basally, becoming paler distally. *Genitalia*. Light brown. Subgenital plate with a deep posteromedian emargination (Fig. 5 and 6). Basal joint of forceps enlarged, segment 2 longer than segment 3, segments 2 and 3 subequal to segment 1. Penis lobes truncate and apically separate (Fig. 5 and 6). In ventral aspect a small projection at base of penis lobe (Fig. 6).

Female Imago (in alcohol): Length of body 13–14 mm, forewing length 13.5–14 mm hindwing length 6 mm. Marking similar to male, but paler. Subanal plate with deep posteromedian emargination (Fig. 11). Caudal filaments marked as male. Legs as colored as male (Figs. 8–10).

*Nymph.*—Unknown.

Holotype: Male Imago, Allotype, female imago, Maoyang, Qongzhong County (19°N, 109°36'E), 2 June 1986.



Figures 1–7. *Isonychia hainanensis* n. sp., male imago. 1. Forewing; 2. hindwing; 3. foreleg; 4. metathoracic leg; 5. genitalia, dorsal; 6. genitalia, ventral; 7. abdomen, dorsal.

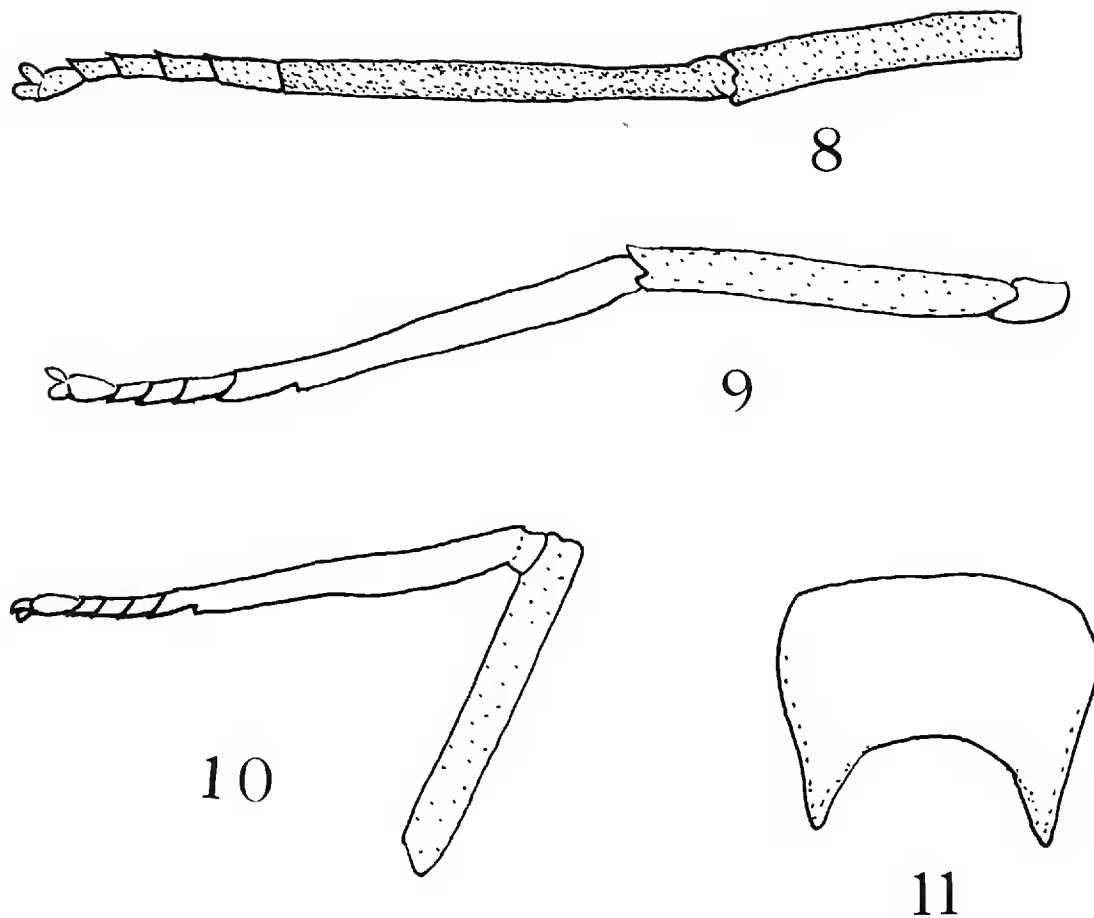
Paratypes: 1 male imago, Diaoluo Mountains, Linshui County, (18°40'N, 109°45'E), 26 May 1986, 3 male and 7 female imagoes, same data as holotype; 34 subimagoes, Jianfeng, Luodong County (18°45'N, 108°40'E) 24–27 April 1986; 1 male subimago, Bawanglin, Baisha County (19°06'N 109°05'E) 1 May 1986.

All specimens were collected by the first author and Mr. Zhang Jun and are deposited in the collection of the Department of Biology, Nanjing Teachers University.

*Biology*.—All specimens were collected as subimagoes, which were attracted to a gas light. These specimens were allowed to transform to adults in special subimago boxes.

The type locality, Maoyang River is a clear and slow moving stream approximately 70 m wide. The substrata is sand and small stones. The river is bordered by forests and farmland.

*Diagnosis*.—*Isonychia hainanensis* apparently belongs to the subgenus *Isonychia* (Kondratieff and Voshell, 1983) and may be easily distinguished from other *Isonychia* known from China (*I. formosana* (Ulmer), *I. japonica* Ulmer, and *I.*



Figures 8–11. *Isonychia hainanensis*, n. sp., female imago. 8. foreleg; 9. mesothoracic leg; 10. metathoracic leg; 11. subanal plate.

*kiangsiensis* Hsu) by the following combination of characters: ventral base of each penis lobe with a small projection and abdomen reddish-brown with a pale middorsal stripe and pair of submedian curved streaks.

#### ACKNOWLEDGMENTS

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